

3.6 Decision Support Subsystem

3.6.1 Description

This subsystem takes into consideration, and will provide the functionality for, optimized information retrieval, simulation, statistical analysis, forecasting and other analytical needs implied by a group of *Project EASI/ED BARD* requirements identified by the team and described below in section 3.6.2.

3.6.2 Processes and Requirements

The Decision Support Subsystem will comprise four basic processes as follows:

1. Exploration

The subsystem will allow users (e.g., auditors and program reviewers) to access, analyze and explore transaction histories by school, student and program. Users will have the ability to view the business information from different angles and analyze the effect of key performance indicators by progressing from one level of detail to the next.

2. Simulation

The subsystem will allow users to build models for financial aid packages and financing options, repayment options, Campus-based award procedures, as well as program legislation and policies.

For instance, participants will be able to simulate their likely eligibility for Federal financial aid and perform “what-if” analysis to determine their potential costs and repayment options based on the financing alternatives available.

3. Trend Analysis and Exception Reporting

The subsystem will allow users to analyze the evolution of data patterns over time, determine trends and identify values that fall outside a specified range. As such, school and aid organization (e.g., lender, guaranty agency) performance data will be monitored, and the system will automatically flag exception cases - performance factors that do not statistically conform to a data pattern.

4. Statistical Sampling

For data repositories containing large amounts of data, such as the transaction histories for all schools, students and programs, the subsystem will allow the users to perform statistical sampling, using statistical and mathematical techniques, in order to identify useful patterns in the data.

The following table presents the description the Project EASI/ED BARD requirements associated with the Decision Support Subsystem:

Requirement Identifier	Requirement Description	Decision Support Process
1060	The system shall allow participants to request simulations of possible financial aid packages and financing options, including: <ul style="list-style-type: none"> - simulating the participant's likely eligibility for Federal financial aid - simulating costs that would be incurred in attending a particular program at a given school - simulating the financial aid package options that may be available to the participant - simulating the financing options that may be available to the participant 	Simulation
1150	The system shall allow auditors and program reviewers the necessary access to transaction histories by school, student, and program in order to perform audits/reviews, based on: <ul style="list-style-type: none"> - Independent student samples - Statistical sampling - Exception reports - Self auditing - Performance based standards and measures 	Exploration Statistical Sampling Exception Reporting
1542	The system shall simulate Campus Based award amounts at the request of IFMD, using the school information stored in the system at the time of the request.	Simulation
1960	The system shall receive financial aid simulation modeling information (e.g., average salaries for various professions) from state departments of labor.	Simulation
1970	The system shall receive financial aid simulation modeling requests from participants.	Simulation
2070	The system shall provide repayment option modeling capabilities to participants. This shall include modeling the effects of loan consolidation, income contingent repayment, and other repayment plans on the number and amount of payments required of participants.	Simulation
2900	The system shall provide authorized parties visibility to Title IV participant information at varying levels of detail and shall associate Title IV participant information across functional areas (e.g., application, disbursement, repayment).	Exploration
2930	The system shall provide statistical sampling and modeling capabilities to support Title IV program oversight functions.	Simulation Statistical Sampling
2950	The system shall monitor key performance indicators and shall flag those indicators whose values are outside predetermined parameters.	Trend Analysis Exception Reporting
2952	The system shall maintain performance metrics for each aid organization and the EASI/ED system itself. Relevant information on these performance metrics shall be provided to external organizations and individuals.	Simulation Trend Analysis
2960	The system shall provide what-if analysis capability to support the formulation of program legislation and policy.	Simulation